

What is claimed is:

1. A two zone auto-focusing system for digital still cameras, which can switch the lens focusing point between two positions namely far focusing position and near focusing position comprising:

an assembly base on which said two zone auto-focusing system is assembled, a solenoid which switches the focusing point of the lens between two points namely far position and near position, a picture taking lens which is assembled in a lens barrel as a lens assembly, an axle bearing part provided on one side of said lens barrel having an axle hole, a guide rail which is fixed on said assembly base and inserted into said hole of axle bearing part, a coil spring placed over said guide rail to push said lens barrel assembly toward the image sensor and hold said lens barrel assembly at the home position namely far position, a coupling arm provided on said lens assembly, a stabilizing fork provided on said lens barrel, and a stabilizing pin fixed on the assembling base and placed between the ends of said fork.

2. A two zone auto-focusing system for digital still cameras as claimed in claim 1, wherein while said lens assembly is moving back and forth, said whole lens assembly is supported and stabilized by said guide rail, said axle bearing part, said stabilizing fork and said stabilizing pin to have said lens assembly move smoothly without any harmful swing.

3. A two zone auto-focusing system for digital still cameras as claimed in claim 1, wherein said coupling arm is connected with said solenoid head so that the lens assembly is moved by the movement of the solenoid head when said solenoid is excited.

4. A two zone auto-focusing system for digital still cameras as claimed in claim 1, wherein said lens assembly is driven and moved away from the image sensor to place said lens assembly at the near position by the movement of said coupling arm through said head of solenoid when said solenoid is excited receiving a signal from the CPU or electronically controlled distance measuring system of the digital still camera.

5. A two zone auto-focusing system for digital still cameras, which can switch the lens focusing point between two positions namely far focusing position and near focusing position comprising:

an assembly base on which said two zone auto-focusing system is assembled, a solenoid which switches the focusing point of the lens between two points namely far position and near position, a picture taking lens which is assembled in a lens barrel as a lens assembly, an axle bearing part provided on one side of said lens barrel having an axle hole, a guide rail which is fixed on said assembly base and inserted into said hole of axle bearing part, a coil spring placed over said guide rail to push said lens barrel assembly away from the image sensor and hold said lens barrel assembly at the home position namely near position, a coupling arm provided on said lens assembly, a stabilizing fork provided on said lens barrel, and a stabilizing pin fixed on the assembling base and placed between the ends of said fork.

6. A two zone auto-focusing system for digital still cameras as claimed in claim 2, wherein while said lens assembly is moving back and forth, said whole lens assembly is supported and stabilized by said guide rail, said axle bearing part, said stabilizing fork and said stabilizing pin to have said lens assembly move smoothly without any harmful swing.
7. A two zone auto-focusing system for digital still cameras as claimed in claim 5, wherein said coupling arm is connected with said solenoid head so that the lens assembly is moved by the movement of the solenoid head when said solenoid is excited.
8. A two zone auto-focusing system for digital still cameras as claimed in claim 5, wherein said lens assembly is driven and moved toward the image sensor to place said lens assembly at the far position by the movement of said coupling arm through said head of solenoid when said solenoid is excited receiving a signal from the CPU or electronically controlled distance measuring system of the digital still camera.